proofs seem to me too convincing to be true, but all things are possible if thorium breaks up into two fragments of about equal weights. I have long thought such an effect must occur among some of the products and I feel confident actinium owes its origin to some product which has two distinct forms of equilibrium—the smaller percentage part yielding actinium. I thought I had a fair amount of scientific nerve, but I am left far behind in your last essay. This search for a father is becoming positively indecent. Why not accept the chemist's view of separate creation and rest happy?"

Letter quoted from
Rutherford
A. S. Eve
The Macmillan Co.
Cambridge, England

A Slugger

In the picture below you can see the ball squashed and distorted against the bat wielded by your editor (some years ago). This picture was used by him when teaching as a problem for his class.

Note that the shadow of the ball has not yet made contact with the bat. It was suggested that the speed of the bat could be calculated by relating the disatnce between ball and bat as shown by the shadow and the distance between bat and ground to the speed of the bat and the speed of light. With the speed of light known, the speed of the bat could be determined. In the time it takes light to travel from bat level to ground (about 24″) and there form a shadow, the bat has traveled the short distance (about 4″) between shadows of the ball and bat.

Some members of the class were skeptical, as students should be, and did not place credence in the result. One pointed out that a ball struck by a bat with such speed would never return to earth. Another suggested that the instructor should leave the class room and join the Yankees!

But the negative was not "doc-
New York

Teacher Specialization

Secondary school teachers of science and mathematics typically teach more than one subject. For example, a teacher of mathematics may also teach physics. Many of them teach only one course in science or mathematics, along with courses in non-science subjects.

In 1960 approximately forty thousand persons taught at least one secondary school course in biology, twenty-five thousand taught at least one in chemistry, sixty thousand in general science, twenty thousand in physics, and twenty-five thousand in other sciences. About fifty thousand persons taught at least one mathematics course in junior high school and about seventy-five thousand taught at least one mathematics course in senior high school.

About two thousand of these teachers hold doctor's degrees, most of which were awarded in fields other than science or mathematics.

Profiles of Manpower in Science and Technology
National Science Foundation

INDEX TO ADVERTISERS

Barnes Engineering Company	237
Budd Stanley Co., Inc.	Inside Front Cover
Central Scientific	197
Ealing Corporation	198
Graflex, Inc.	239
Klinger Scientific Apparatus Corp.	221
Macalaster Scientific Corporation	224
Nuclear—Chicago Corporation	Back Cover
Search	Inside Back Cover
Welch Scientific Company	202

Author Index To Volume 1

Ainslie, Donald S. Circuits for demonstration experiments with a photoelectric cell—229.

Ahlgren, Andrew. Experiments with simple equipment—78.

——— Inexpensive apparatus for studying the photoelectric effect and measuring Planck's constant—183.

Barr, E. Scott. Review of *Count Rumford, Physicist Extraordinary*—37.

Beams, J. W. High centrifugal fields—103.

Bray, Edmond C. Review of *Physics, A Basic Science*—131

Calandra, Alexander. Apparatus for junior high schools—82.

Calbick, C. J. The discovery of electron diffraction by Davisson and Germer—63.

Carpenter, George P. Conservation principles—192.

Christensen, F. E. The oscilloscope and how it may be used—172.

Cook, C. Sharp. Education of a Danish physicist—72.

Correll, Malcolm. Presentation: Francis Lee Friedman, Oersted Medalist for 1962—86.

Foster, Ronald M., Jr. and **Hrycak, Peter.** The Telstar satellite—how its temperature is controlled—114.

Freeman, Ira M. Does physics explain why?—180.

Frier, G. Cartoons—"George"—19, 36, 42, 77, 96, 109, 126, 171, 194, and 211.

Galley, Elmer L. An inexpensive continuous cloud chamber—80.

——— Review of *Experiments in Seeing*—188.

——— Tom Swift's cocktail party—141

Haun, R. R. Review of *Science for the Non-Scientist*—130.

Hill, E. L. Review of *What is Relativity?*—187.

Houston, William V. Review of *The Cavendish Laboratory, Nursery of Genius*—84.

Hrycak, Peter. See Foster, Ronald M., Jr.—114.

Iona, Mario. Review of *Orbit: A Picture Story of Force and Motion*—186.

———Regional sections of AAPT—191.

——— Satellite orbits—55.

Jelley, J. V. Čerenkov radiation: Its origin, properties and applications—203.

Kantor, Frederick W. Floating balloons on gas interface—82.

Karplus, Robert and **Lachterman, David.** Review of *The Laws of Physics*—230.

Karplus, Robert. A New Journal—224.

Kruglak, Haym. Physical effects of apparent "weightlessness"—34.

Lachterman, David—see Karplus, Robert—230.

Lazarus, David. Review of *Coulomb's Law and Coulomb's Force Constant*—233.

Lefler, Ralph. Visiting scientist program in physics for high schools—190.

Liddel, Urner. Physics in space—164.

Lindsay, R. B. What does acoustics have to offer?—159.

Luyten, Willem, J. Review of *The Universe*—188.

Marean, John H. Review of *Programmed Manual for Students of Fundamental Physics*—84.

——— Review of *Fundamental Physics*—84.

Miner, Thomas D. Review of *The Lloyd William Taylor Manual of Advanced Undergraduate Experiments in Physics*—130.

——— Physics for girls—167.

Morrison, P. Ice that sinks—209.

Nier, Alfred O. The new unified scale for atomic masses and weights—11.

Paldy, Lester G. The water can paradox—126.

Phillips, Melba. Electromotive force and the law of induction.—155.

——— Reveiw of *Micrographia* and *Robert Hooke*—85.

Priestley, Herbert. Review of *Speed of Light*—232.

Reque, Erling S. Review of *The Wonder of Heat Energy*—187.

——— Review of *The Wonder of Light*—187.

Schumm, Ruth. Peace corps physics teachers—111.

Sears, Francis W. A substitute for pith balls and balloons in demonstrations of electrcal forces—225.

——— Weight and weightlessness—20.

Seeger, Raymond J. Review of *Contemporary Physics*—231.

Seitz, Frederick. Centennial of the National Academy of Sciences—70.

Sepúlveda, Ramón. College entrance examination in Chile—62.

Shutts, J. Hervey. Review of *Automation and the Challenge to Education*—38.

Straley, Joseph W. Science curricula in transition—76.

Strickler, Allen. Thermochromatic cards, colorful new media for communicating principles of heat—226.

Struthers, Joseph A. Teaching the dynamics of uniform circular motion—27.

Sutton, Richard M. An introvert rocket or mechanical jumping bean—108.

——— On asking (and answering) questions—222.

Tomer, D. W. Ratio of surface area to volume for a sphere and cube—192.

Valasek, Joseph. Piezoelectricity—217.

Verbrugge, Frank. An historic occasion—32.

Weidner, Richard T. Review of *The Mainstream of Physics*—230.

Wichers, Edward. International agreements on the measurement of physical quantities—17.

Williams, Dudley. Infrared radiation—212.

Youden, W. J. Parable of the fisherman—120.

——— Review of *Lady Luck, The Theory of Probability*—231.

Youngner, Philip. Review of *Physics for the Inquiring Mind: The Methods, Nature and Philosophy of Physical Science*—39.

Analytical Subject Index To Volume 1

Articles and other items are placed under sections listed below. An attempt is made to place items under sections indicating the general fields of the items. Departmental headings of the journal are also used as section titles. Brief descriptive notes or the titles of items are used in the index.

Section Titles for the Index of Volume 1

Acoustics
Announcements
Atomic mass
Apparatus
Book reviews
Centrifuges
Centripetal-force
Cerenkov radiation
Conservation principles
Cosmic rays
Demonstrations
Distinguished service citations
Dynamics
Editorial
Education as a discipline
Education in other countries
Electricity and magnetism
Electron diffraction
Elementary particles
Errata
Errors in texts
Examinations
Film reviews
Freely falling bodies
"George"
Gravitation
International agreements
Isotopes
Letters to the Editor
"Little Stinkers"
National Academy of Sciences
Notes from the Editor
Numbers
Oersted award
Oscilloscope
Peace Corps
Philosophy of physics
Photoelectric effect
Physics for girls
Physics in space
Piezoelectricity
Prefixes
Preparation of manuscript
President's message
Prizes
Proceedings of AAPT
PSSC materials
Questions
Radiation
Radioactivity
Reference system
Regional sections of AAPT
Relativity
Salaries
Satellites
Scraps
Sections of AAPT
Solid state
Teacher Recognition Program
Telstar
Velocity of light
Visiting Scientist Program
Weight and weightlessness

Acoustics

Opportunities in Acoustics. R. B. Lindsay—159.

Announcements

January 1964 meeting of AAPT—190.
Membership records. Changes of address of AAPT members—190.
Regional sections of AAPT. Mario Iona—191.
Summer meeting AAPT, University of Maine—44.
3-M Prizes—88.
Users of PSSC materials—44 and 129.
Visiting Scientist Program for High Schools. Ralph W. Lefler—190.

Apparatus

Balloons on air-freon interface. Frederick W. Kantor—82.
Centrifuges. J. W. Beams—103.
Cloud chamber. Elmer L. Galley—80.
Demonstration of "Weightlessness." Haym Kruglak—34. Roland A. Jalbert—124.
Junior High Schools. Alexander Calandra—82.
Mechanical jumping bean. Richard M. Sutton—108.

Minimum-instruction experiments. Andrew Ahlgren—78.
Oscilloscope, its uses. F. E. Christensen—172.
Photoelectric effect and Planck's constant. Andrew Ahlgren—183.
Soviet lecture demonstrations—179.
Temperature control of Telstar. Ronald M. Foster, Jr., and Peter Hrycak—114.
Water can paradox. Lester G. Paldy—126.

Atomic Mass

International agreements—Edward Wichers—17.
New scale. Alfred O. Nier—11. Eratum—94.

Book Reviews

Automation and the Challenge to Education, Luther H. Evans and George E. Arnstein, Editors. Reviewed by J. Hervey Shutts—38.
The Cavendish Laboratory, Nursery of Genius, Egon Larson. Reviewed by William V. Houston—84.
Count Rumford, Physicist Extraordinary, Sanborn C. Brown. Reviewed by E. Scott Barr—37.
Experiments in Seeing, Harry Asher. Reviewed by Elmer L. Galley—188.
Fundamental Physics, Jay Orear. Reviewed by John H. Marean—84.
The Lloyd William Taylor Manual of Advanced Undergraduate Experiments in Physics, Thomas B. Brown, Editor. Reviewed by Thomas D. Miner—130.
Mathematical Tables & Formulas, compiled by Robert D. Carmichael and Edwin R. Smith—131.
Orbit: A Picture Story of Force and Motion, Hy Ruchlis. Reviewed by Mario Iona—186.
Micrographia, Robert Hooke. Reviewed by Melba Phillips—85.
Physics—A Basic Science, Frank L. Verwiebe, Gordon E. Van Hooft, Robert R. Suchy. Reviewed by Edmund C. Bray—131.
Physics for the Inquiring Mind: The Methods, Nature and Philosophy of Physical Science, Eric M. Rogers. Reviewed by Philip Youngner—39.
Programmed Manual for Students of Fundamental Physics, Jay Orear. Reviewed by John H. Marean—84.
Robert Hooke, Margaret 'Espinasse. Reviewed by Melba Phillips—85.
Science for the Non-Scientist, A. R. Patton. Reviewed by R. R. Haun—130.
The Universe, Otto Struve. Reviewed by Willem J. Luyten—188.
What is Relativity? L. D. Landau and G. B. Rumer. Reviewed by E. L. Hill—187
The Wonder of Heat Energy, Hy Ruchlis. Reviewed by Erling S. Reque—187.
The Wonder of Light, Hy Ruchlis. Reviewed by Erling S. Reque—187.

Centrifuges

High fields, uses of centrifuges. J. W. Beams—103.

Centripetal Force

Confusion in texts. Robert Bento—123.
Definitions in encyclopedias. Fred G. Hewitt—123.
High centrifugal fields. J. W. Beams—103.
Teaching dynamics of circular motion. Joseph A. Struthers—27.

Cerenkov Radiation

Origin, characteristics and applications. J. V. Jelley—203.

Conservation Principles

Angular momentum, a physicist's game—81 and 179.
Momentum and energy. George P. Carpenter—192.

Cosmic Rays

High Energy primary ray—193.

Demonstrations

Balloons on gas interface. Frederick W. Kantor—82.
Heavy ice. P. Morrison—209.
Mechanical jumping bean. Richard M. Sutton—108.
Photocell. Donald S. Ainslie—229.
Polystyrene balanced spheres for electrostatics. Francis W. Sears—225.
Simple equipment. Andrew Ahlgren—78.
Thermochromic cards color changes. Allen Strickler—226.
Weightlessness. Haym Kruglak—34.

Distinguished Service Citations

C. Luther Andrews. Kenneth E. Davis. R. Bruce Lindsay. Melba Newell Phillips—87.

Dynamics

Circular motion. Joseph A. Struthers—27.
Conservation principles. George P. Carpenter—192.
Demonstrations on weightlessness. Haym Kruglak—34.
High centrifugal fields. J. W. Beams—103.
Mechanical jumping bean. Richard M. Sutton—108.
Period of a satellite—94.
Physicists game—conservation of angular momentum—81 and 179.
Satellite orbits. Mario Iona—55.

Editorial

Asking and answering questions. Richard M. Sutton—222.
Does physics explain why? Ira M. Freeman—180.
New journal. Frank Verbrugge—33.
Science curricula in transition. Joseph W. Straley—76.
Statistics—Parable of the fisherman. W. J. Youden—120.

Education as a Discipline

Role of professor of education—129.

Education in Other Countries

Education of a Danish physicist. C. Sharp Cook—72.
Examination in Chile. Ramón Sepúlveda—62.

Electricity and Magnetism

Čerenkov radiation. J. V. Jelley—203.
Electromotive force and the law of induction. Melba Phillips—155. Michael Faraday's Diary—239.
Electrostatic demonstration. Francis W. Sears—225.
Energy of charges on capacitor—133.
Faraday's Diary—239.
Faraday's law—133. See also Melba Phillips—155.
Infrared radiation. Dudley Williams—212.
Location of source of energy—193.

Electron Diffraction

Discovery. C. J. Calbick—63.

Elementary Particles

"Particles," definition—94.

Errata

Atomic masses—94.
Two sailors—94.

Errors in Texts

Law of gravitation—46 and 142. See also L. W. Huff—125.

Examinations

College entrance in Chile. Ramón Sepúleveda—62.
Sample questions in Teacher Recognition Program—143.

Film Reviews

Coulomb's Law and Coulomb's Force Constant, Eric Rogers. Reviewed by David Lazarus—233.
Speed of Light, PSSC Film. Reviewed by Herbert Priestly—232.

Freely falling bodies

Demonstrations. Haym Kruglak—34. Roland A. Jalbert—124.

Fundamental Particles

Nature of—94.

George

Curves—171.
Did we get any data?—211.
Electrostatics—96.
Give me the bullet—109.
Introduction—36.
Simple machines—126.
Unit of length—19.
Vector products—77.
Weightlessness—42. Solution—136.
Weightlessness—194.

Gravitation
Comparison with electrical forces—142.
Form of statement—46 and 142.
Problem. L. W. Huff—125.

International Agreements
On physical constants. Edward Wichers—17.

Isotopes
Carbon 12 as basis of atomic mass scale. Alfred O. Nier—11.
Ice that sinks. P. Morrison—209.

Letters to the Editor
Law of gravitation. L. D. Huff—125.
On centrifugal force. Robert Bento—123.
On centripetal force. Fred G. Hewitt—123.
Simple harmonic motion and freely falling system. Roland A. Jalbert—124.
Weight and weightlessness. Allen L. King—122; Raymond B. Sawyer—123; Mario Iona—182.

Little Stinkers
Charges on capacitors, energy—133 and 238.
Conical pendulum—238.
Conservation principles. George P. Carpenter—192.
Electromotive force and Faraday's law of electromagnetic induction—133 and 155.
Kiddie car question—92 and 193.
Ratio of area and volume of a solid. D. W. Tomer—192.
Seventeen camels—134.
Two sailors and no wind—45; Erratum—94; Solution—134.
Two solutions of a problem in dynamics—92 and 192.
Where is the source of energy?—193.

National Academy of Sciences
Centennial. Frederick Seitz—70.

New Journal
Science and Children—224.

Notes from Editor
Change of address—77.
Preparation of manuscripts—36, 121, and 195.

Numbers
Atoms in whisker—94.
Molecules in one cc of H_2O placed in line—46.
Seventeen camels—134.

Oersted Award
Francis Lee Friedman, medalist for 1962. Announcement by Malcolm Correll—86.

Oscilloscope
Use and construction. F. E. Christensen—172.

Peace Corps
Physics teachers in corps. Ruth Schumm—111.

Philosophy of Physics
Does physics explain why? Ira Freeman—180.

Photoelectric Effect
Apparatus for determining h. Andrew Ahlgren—183.
Photocell demonstration. Donald S. Ainslie—229.

Physics for Girls
Classes in high school. Thomas D. Miner—167.

Physics in Space
Current topics. Urner Liddel—164.

Piezoelectricity
Piezoelectric crystals, characteristics, and uses. Joseph Valasek—217.

Prefixes
Table of—94.

Preparation of manuscripts
Note from editor—36 and 121.

President's Message
Cost of high school education—94.

Prizes
3-M Essay contest—88, 128, and 190.

Proceedings of AAPT
New York meeting, January 1963—89.

PSSC Materials
Mailing list—44 and 129.

Quotations
Brief quotations—94, 119, 129, 142, and 147.

Questions
Asking and answering questions. Richard M. Sutton—222.
Meaningless questions. P. W. Bridgman—211.

Radiation
Čerenkov. J. W. Jelley—203.
Infrared. Dudley Williams—212.
Thermochromic cards, detection of radiation. Allen Srtickler—226.

Radioactivity
Rutherford's letter to Boltwood—240.

Reference systems
Two sailors—45 and 134.

Regional Sections of AAPT
Organization. Mario Iona—191.

Relativity
Velocity of Light—193.

Salaries
Of teachers—94.

Satellites
Period of—94.
Telstar, temperature control. Ronald M. Foster, Jr. and Peter Hrycak—114.
Types of orbits, placing of satellites in orbit. Mario Iona—55.

Scraps
Budget distribution—85.
Excellence—26.
High energy cosmic ray—193.
Mach in 1886, Snow in 1959—16.
Michael Faraday—239.
New prefixes—94.
Numbers—46 and 94.
"Particles"—94.
Period of a satellite—94.
Physicist's game—81 and 179.
President's message on education—94.
Science teachers on National Registry—78 and 234.
Slugger—241.
Soviet lecture demonstrations—179.
Space-time lullaby—47.
Teacher specialization—241.
Tom Swift's cocktail party—141.
Velocity of light from a moving source—193.

Sections of AAPT
Regional section. Mario Iona—191.

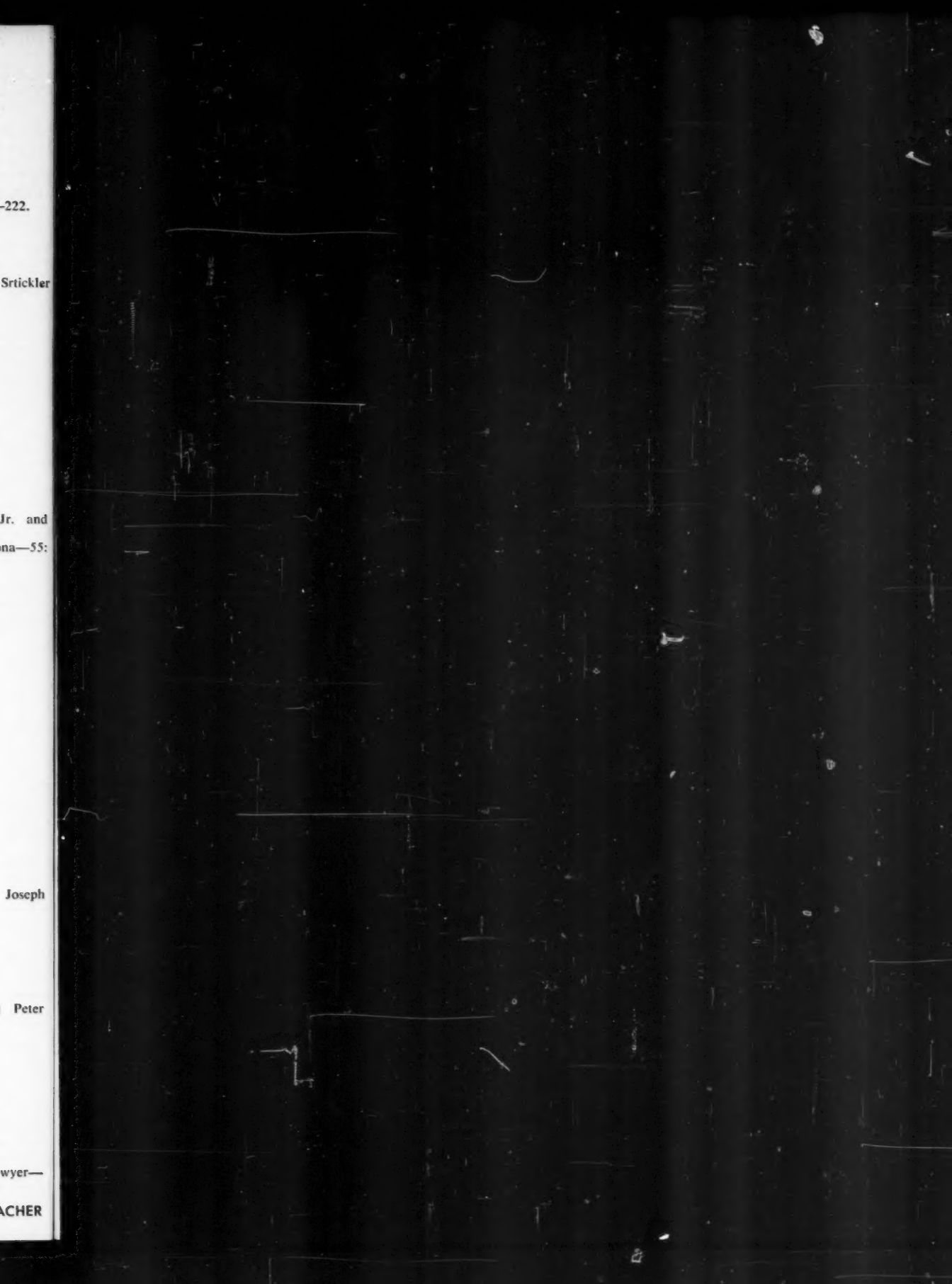
Solid State
Piezoelectric crystals, properties and applications. Joseph Valasek—217.

Teacher Recognition Program
Announcements for 1963—88 and 128.
Awardees for 1962—24.
Sample questions—143.

Telstar
Temperature control. Ronald M. Foster, Jr., and Peter Hrycak—114.

Velocity of Light
Moving source—193.

Visiting Scientist Program
For high schools. Ralph Leiter—190.

Weight and Weightlessness
Definitions. Francis W. Sears—20.
Demonstration. Haym Kruglak—34.
George—42, 136, and 194.
Letter to Editor. Allen L. King—122. Raymond B. Sawyer—123. Mario Iona—182.

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